Yeast is a source of a nutrient for bread making. Yeast is a microorganism that breaks down sugar to produce alcohol and carbon dioxide, which makes dough rise. Yeast is often used to make bread, cakes, and other baked goods. It contains all original grain nutrients and is a good source of B vitamins.

Protein is needed to build, repair, and contain all original grain nutrients. Proteins are long chains of amino acids. Amino acids are special organic molecules used by living organisms to make proteins. There are twenty different kinds of amino acids that are necessary for the human body to function properly.

Foods include oatmeal, brown rice, bulgur (bran, germ, and endosperm). Whole grain (cracked wheat), quinoa, spelt, millet, and grains from husks. A grain seed; on corn, the kernels are the yellow part that we eat. A kernel (about 83%) of the seed is ground into white flour. Each tiny kernel contains three parts: bran, germ, and endosperm. Whole grains contain the entire grain kernel and are the food source for the sprouting kernel (germ). When grown as a crop, the germ sprouts and grows into a new plant.

Dietary fiber may help to reduce your cholesterol and type 2 diabetes. Fiber is also important for keeping your bowel function healthy. And it makes you feel full, which can help you to maintain a healthy weight.

B Vitamins
The B vitamins found in grains—thiamin, riboflavin, and niacin—play an important role in keeping your body running smoothly. These B vitamins are part of the enzyme system, helping to keep your brain in top shape!

Folic Acid
Folic acid is a B vitamin found in grains that helps to make healthy new cells. Women, especially pregnant women, need folic acid in their diet to help prevent birth defects. Folic acid is added to many foods as a part of your daily diet.

Iron
Iron is a mineral found in grains that your body needs in order to carry oxygen through your blood.

Magnesium
Magnesium is a mineral that your body uses to build bones and release energy from muscles.

Selenium
Selenium is a mineral that protects the cells in your body from being damaged, keeping your immune system healthy. A healthy immune system helps you fight off disease and infection.

Vitamin A
Grains also provide vitamin A, which is important for vision and a healthy immune system.

Vitamin D
Grains contain vitamin D, which is important for strong bones.

Vitamin E
Grains are a good source of vitamin E, which is important for a healthy heart.

Folate
Folate is a B vitamin found in grains that helps the body make new cells. It is necessary for proper growth and development, especially in pregnant women.

Niacin
Niacin is a B vitamin found in grains that helps the body make energy from food. It is necessary for proper growth and development.

Thiamin
Thiamin is a B vitamin found in grains that helps the body use carbohydrates for energy. It is necessary for proper growth and development.

Riboflavin
Riboflavin is a B vitamin found in grains that helps the body use food for energy. It is necessary for proper growth and development.

Vitamin B6
Vitamin B6 is a B vitamin found in grains that helps the body use food for energy. It is necessary for proper growth and development.

Vitamin B12
Vitamin B12 is a B vitamin found in grains that helps the body use food for energy. It is necessary for proper growth and development.

The nutrients in grains are powerful at keeping you strong and healthy:

- Muscle strength and growth
- Stronger bones
- Healthy teeth
- Nourishment of cell growth
- Healthy brain and nervous system
- Healthy skin, hair, and nails
- Better mood and energy
- Stronger immune system
- Better eyesight
- Better digestion

In conclusion, grains are an important part of a healthy diet. Eating whole grains as part of a healthy diet may reduce your risk of some chronic (long lasting or recurring) diseases, including heart disease especially whole grains, include dietary fiber, B vitamins, and B vitamins. Eating whole grains as part of a healthy diet may reduce your risk of some chronic (long lasting or recurring) diseases, including heart disease. The nutrients in grains are powerful at keeping you strong and healthy:

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In conclusion, grains are an important part of a healthy diet. Eating whole grains as part of a healthy diet may reduce your risk of some chronic (long lasting or recurring) diseases, including heart disease especially whole grains, include dietary fiber, B vitamins, and B vitamins.
The USDA says that kids your age, who are getting at least 30 minutes per day of physical activity or exercise, should eat 3 to 5 ounces of grains per day.

**Challenge 1: Whole Grain Unscramble**

My color can be either white or brown and I am the most eaten grain in the world.

MEOATAL

A whole grain that is served hot or eaten at breakfast. Some people add milk or fresh fruit to this whole grain.

Contains the entire grain kernel.

HOWNEL NRGIA

(Source: USDA Supplemental Nutrition Assistance Program)

**Challenge 2: Lunch**

You invite your family and three friends for a falafel lunch.

How many attendees will there be at your lunch?

Calculate the quantity needed per person:

| 1 serving = ½ cup falafel mix found in the bulk aisle |
| 1 serving = 2 whole wheat pita wraps |
| 2 wraps x ____ guests = ____ wraps |

You find whole wheat pita bread with 6 pitas in the package at the store. How many packages of pita will you need for your lunch?

| 1 tablepoon (tbsp.) tahini; 1 serving = 2 tablespoon (tbsp.) tahini; 2 tablespoons = 1 ounce (oz.) |
| 2 tbsp. x ____ guests = ____ tsp. |

You find a 10 oz. jar of tahini at the store. How much falafel mix and tahini will you need in total?

**Career Corner**

Ian Naccarato, Director of Quality Assurance, Nature’s Bakery:

Describe Nature’s Bakery and what you do there.

Nature’s Bakery is a company that sells whole-wheat fig bars, with 10 different flavors as well as a seasonal flavor. They’re delicious snacks for being on the go. Our corporate office is in Reno, with two manufacturing facilities in Carson City, Nevada, and a new one in St. Louis, Missouri.

As Director of Quality Assurance, I am the food police! All of the ways we make the products and packaging are regulated by guidelines set forth by myself or the US Department of Agriculture. We also have customer-specific guidelines, and a third-party auditor checks our general manufacturing practices. In all aspects, we make sure we are being compliant. In food safety, we write policies that ensure that everyone handling food is being safe—that means proper glove-wearing or offering training about food-contact surfaces. And we look at packaging compliance, making sure all the labels are correct.

How did you get into this line of work?

I started with a college degree in exercise science and a minor in nutrition, and I was thinking of being a nutritionist or a personal trainer. But I found this job, and I saw that it basically meant supplying a healthy product to the whole world. I would get to be part of ensuring it was healthy, and helping to create a cleaner label. I was able to use my nutrition background to contribute to the formulas for the bars, which was very rewarding.

What is a typical day like for you?

It starts very early in the morning. I am typically at the bakery at 6:00 a.m. The first thing I do is go out and check production, and walk through the facility to see that everything’s running well. Once I do the walk-through with my team, we review what happened on the prior day. All the processing of paperwork gets reviewed, and we start verifying quality and certifying the product to be sold to customers. My workday is about 10 hours long, five days a week.

I have given tours for school kids in our facility, for ages 8 to 11, and they were just wowed by the size of the equipment, how big the mixers are, and how our bars are made. They are impressed by the fact that when the ingredients start out, it doesn’t look like food, but as they follow it they see it being cooked and packaged. Our technicians do taste tests per batch, and every batch gets sensory tests, for appearance, color, and taste. They have to make sure the raspberry tastes like raspberry, blueberry tastes like blueberry.

What’s your favorite thing about what you do?

Growth—we’ve doubled in production size and capabilities every year since I started about three years ago. Right when Nature’s Bakery started getting large is when I came on board, and I helped put in procedures to get our bars sold in stores like Walmart and Costco.

How would somebody prepare for a career in your industry or profession?

I think food manufacturing doesn’t get a whole lot of discussion, but it’s a great industry to be a part of because it’s an accumulation of every industry. We have sales and marketing, maintenance and engineers, sanitation… But the preparation for quality assurance is a food science background. Some schools offer degrees in that now, so students can learn about ingredients.